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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/830,042	04/23/2004	John M. Holt	22216-00003-US1	9699

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EXAMINER	
RUTTEN, JAMES D	
ART UNIT	**PAPER NUMBER**
2192	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/830,042	HOLT, JOHN M.	
	Examiner	Art Unit	
	J. Derek Rutten	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 November 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) *1-6 and 11-13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-10 and 14-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/14/06, 8/21/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to Applicant's submission filed 11/7/2006, responding to the 10/11/2006 Office action which detailed a requirement for restriction and election. Applicant has provisionally elected group II (claims 7-10 and 14-19) for examination without traverse. Claims 1-6, 11-13, and 20-23 are likewise withdrawn from examination.

2. Claims 7-10 and 14-19 have been examined.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Modification of computer applications at load time for distributed execution.

4. The specification is objected to since a copyright notice appears on page 10, which does not comply with the requirements of 37 CFR § 1.71(d) and 1.71(e). The copyright notice should appear at the beginning of the specification, and use the language set forth in 37 CFR § 1.71(e). See MPEP 608.01. Correction is required.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re*

Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 7-10, 14-16, and 19 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 18-20, 23 and 24 of copending Application No. 11/111,757 (hereinafter '757). An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined application claim is not patentable distinct from the reference claim because the examined claim is either anticipated by, or would have been obvious over, the reference claim. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 7 is generic to the method recited in claim 18 of the '757 application. That is, claim 7 is anticipated by claim 18 of the '757 application. For example:

In regard to claim 7, the '757 application claims:

A method of loading an application program onto each of a plurality of computers, the computers being interconnected via a communications link, the method comprising the step of modifying the application as it is being loaded. See claim 18:

> 18. A method of loading an application program onto each of a plurality of computers, the computers being interconnected via a communications link, the method comprising the step of modifying the application before, during, or after loading and before execution of the relevant portion of the application program.

Further claims 8-10, 14-16 and 19 are likewise obvious over claims 19, 20, 23, and 24 of the '757 application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claims 7, 10 and 19 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 12, and 18 of copending Application No. 11/111,781 (hereinafter '781). An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined application claim is not patentable distinct from the reference claim because the examined claim is either anticipated by, or would have been obvious over, the reference claim. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 7 is generic to the method recited in claim 12 of the '781 application. That is, claim 7 is anticipated by claim 12 of the '781 application. For example:

In regard to claim 7, the '781 application claims:

A method of loading an application program onto each of a plurality of computers, the computers being interconnected via a communications link (see claim 10 lines 2-3 of the '781 application), *the method comprising the step of modifying the application as it is being loaded.* See claim 12 line 2:

> modifying said application program before, during or after loading...

Further claims 10 and 19 are likewise obvious over claims 12 and 18 of the '781 application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

8. Claims 7-10, 14-16 and 19 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 18-20, 23, 24 of copending Application No. 11/259,634 (hereinafter '634). An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined application claim is not patentable distinct from the reference claim because the examined claim is either anticipated by, or would have been obvious over, the reference claim. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 7 is generic to the method recited in claim 18 of the '634 application. That is, claim 7 is anticipated by claim 18 of the '634 application. For example:

In regard to claim 7, the '634 application discloses:

A method of loading an application program onto each of a plurality of computers, the computers being interconnected via a communications link (see claim 18 lines 1-3), *the method comprising the step of modifying the application as it is being loaded.* See claim 18 line 6:

> ...modifying the application before, during, or after loading ...

Further claims 8-10, 14-16 and 19 are likewise obvious over claims 19, 20, 23, and 24 of the '634 application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. Claims 7-10, 14-16 and 19 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 101-103, 106, and 107 of copending Application No. 11/259,885 (hereinafter '885). An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined application claim is not patentable distinct from the reference claim because the examined claim is either anticipated by, or would have been obvious over, the reference claim. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 7 is generic to the method recited in claim 18 of the '885 application. That is, claim 7 is anticipated by claim 18 of the '885 application. For example:

In regard to claim 7, the '885 application discloses:

A method of loading an application program onto each of a plurality of computers, the computers being interconnected via a communications link (see claim 101 lines 1-3), *the method comprising the step of modifying the application as it is being loaded.* See claim 101 line 6:

> ...modifying the application before, during, or after loading ...

Further claims 8-10, 14-16 and 19 are likewise obvious over claims 102, 103, 106, and 107 of the '885 application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 10 and 19 rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that they fail to point out what is included or excluded by the claim language. These claims are omnibus type claims. See MPEP 2173.05(r). For the purpose of further examination, they are interpreted only in the context of any listed limitations.

12. Claims 8 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

13. Claim 8 recites the limitation "the modification" in line 1. There is insufficient antecedent basis for this limitation in the claim. Claim 8 depends from subsequent claim 10 (contrary to the recommended form of the claims described in MPEP 608.01(m): "All dependent claims should be grouped together with the claim or claims to which they refer to the extent practicable"). However, for the purpose of further examination, claim 8 will be interpreted as being dependent upon claim 7 in order to provide proper antecedent basis.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

15. Claims 7 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,760,903 to Morshed et al. (hereinafter "Morshed").

In regard to claim 7, Morshed discloses:

A method of loading an application program onto each of a plurality of computers, the computers being interconnected via a communications link, See Figure 29 and associated text in column 32:50-57, e.g. "network";

the method comprising the step of modifying the application as it is being loaded. See column 20:60-61:

> Byte code may be instrumented by instrumenting each class as the class is loaded by the VM runtime system

In regard to claim 8, the above rejection of claim 7 is incorporated. Morshed further discloses: *wherein the modification of the application is different for different computers.* See column 33:28-31, e.g. "different activities."

16. Claims 10, 14, 15 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,802,585 to Scales et al. (hereinafter "Scales").

In regard to claim 10, Scales discloses:

A method of loading an application program onto each of a plurality of computers.... See Fig. 2 and column 4:29-30, e.g. "instrumented."

In regard to claim 14, Scales discloses:

A method of compiling or modifying an application program to run simultaneously on a plurality of computers interconnected via a communications link See Figure 2 with supporting disclosure in column 4:29-30, e.g. "programs 215 are instrumented", *said method comprising the steps of:*

(i) detecting instructions which share memory records See Scales column 4:38-42, e.g. "coherency."

(ii) listing all such shared memory records and providing a naming tag for each listed memory record See column 6:20-21, e.g. "table," and column 11:6-10, e.g. "ID."

(iii) detecting those instructions which write to, or manipulate the contexts of, any of said listed memory records, and See column 4:30-32, e.g. "stores."

(iv) generating an alert instruction following each said detected write or manipulate instruction, said alert instruction forwarding the re-written or manipulated contents and name tag of each said re-written or manipulated listed memory record. See column 1:43-49, e.g. "message passing" and column 32-35, e.g. "miss check."

In regard to claim 15, the above rejection of claim 14 is incorporated. Scales further discloses: *carried out prior to loading the application program onto each said computer.* See column 4 lines 29-30, e.g. "prior to execution."

In regard to claim 19, Morshed discloses:

A method of compiling or modifying an application program to run simultaneously on a plurality of computers interconnected via a communications link...

See Fig. 2 and column 4:29-30, e.g. "instrumented."

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morshed in view of Scales.

In regard to claim 9, the above rejection of claim 7 or 8 is incorporated. Morshed does not expressly disclose further elements of claim 9. However, Scales teaches:

wherein said modifying step comprises:

(i) detecting instructions which share memory records See Scales column 4:38-42, e.g. "coherency."

(ii) listing all such shared memory records and providing a naming tag for each listed memory record See column 6:20-21, e.g. "table," and column 11:6-10, e.g. "ID."

(iii) detecting those instructions which write to, or manipulate the contexts of, any of said listed memory records, and See column 4:30-32, e.g. "stores."

(iv) generating an alert instruction corresponding to each said detected write or manipulate instruction, said alert instruction forwarding the re-written or manipulated contents and name tag of each said re-written or manipulated listed memory record. See column 1:43-49, e.g. "message passing" and column 32-35, e.g. "miss check."

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Scales' shared memory with Morshed's loading in order to provide coherency (see Scales column 1:20-26).

19. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scales as applied to claim 14 above, and further in view of Morshed.

In regard to claim 16, the above rejection of claim 14 is incorporated. Scales does not expressly disclose: *carried out during loading of the application program onto each said computer.* However, Morshed teaches instrumenting during loading. See column 20:60-61. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Morshed's teaching of loading with Scales' modification in order to automatically instrument a class instance (see Morshed column 20:61-65).

20. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scales as applied to claim 14 above, and further in view of U.S. Patent Application Publication 2004/0163077 by Dimpsey et al. (hereinafter "Dimpsey.")

In regard to claim 17, the above rejection of claim 14 is incorporated. Scales does not expressly disclose: *carried out by just-in-time compilation.* However, Dimpsey teaches just-in-time compilation. See paragraph [0050]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Dimpsey's compiler with Scales' modification in order to increase execution speed while reducing compilation time as inherently provided by just-in-time compilation.

In regard to claim 18, the above rejection of claim 14 is incorporated. Scales does not expressly disclose: *carried out by re-compilation after loading.* However, Dimpsey teaches dynamic instrumentation after loading code. See Abstract. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Dimpsey's dynamic instrumentation in order to minimize system perturbation (see Dimpsey's Abstract). Note that page 9 lines 6-8 of Applicant's specification inform broad interpretation of the concept of "compilation."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Derek Rutten whose telephone number is (571)272-3703. The examiner can normally be reached on T-F 6:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571)272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jdr

TUAN DAM
SUPERVISORY PATENT EXAMINER